

4. *New South African Solifugae*.—By R. F. LAWRENCE, B.A., Ph.D.,
Assistant in Charge of Arachnida.

(With 18 Text-figures.)

THE following paper consists of descriptions of new species found among unidentified material in the Museum's collection, which has accumulated over a number of years and has been taken in various parts of South Africa. It reveals the fact that the rich fauna of the south-western districts, and especially its distribution, is not by any means completely known; the fact that three new species of *Solpuga* and one of *Blossia* have been found to inhabit the higher mountain ranges of the Cape, most of them taken above 4000 feet, points to the existence of a peculiar and interesting Solifugid fauna which is limited in distribution to the higher altitudes of the Cape geological system. The distribution of certain known species on the other hand, such as *Solpuga vineta* and *Solpuga fusca*, is wider than at first supposed. Another region which is as yet insufficiently known and which would repay more detailed exploration is that formed by the coast-line strip from Malmesbury northwards to the Orange River.

This paper contributes, as new to the Solifugid fauna, seven species of *Solpuga*, one of *Zeriassa*, four of *Blossia*, and one of *Melanoblossia*; a number of records, some of which are new, have been added.

Gen. SOLPUGA, Licht.

Solpuga antelopicornis, n. sp.

(Text-fig. 1.)

1843. 4 ♂♂, Great Winterhoek Mountains, 5000 feet.

Colour.—Headplate black, mandibles above and laterally in the upper half black, remainder yellow; legs and palpi black, except femur and tibia of palp below and apical segments of legs 2-4 below, which are brown; tergites of abdomen blackish brown clothed with mixed black and brown hairs, the sides deep violet to black, a band of whitish hairs on each side of the tergites; sternites yellow in the middle, blackish at the sides (the last 1-2 segments altogether black),

covered with yellowish silky hairs; malleoli sharply edged with black.

Dentition.—Outer series as in fig. 1, *a*, seen from the outer side; inner series consisting of 3 teeth decreasing successively in size posteriorly, the space separating the first from the second considerably greater than that separating the second from the third. Lower



FIG. 1.—*Solpuga antelopicornis*, n. sp.

jaw with anterior main tooth separated from the higher posterior main tooth by two intermediate teeth which are nearer to the posterior than to the anterior tooth; the anterior of the intermediate teeth is the smaller of the two and has just in front of it a small, hardly perceptible granule.

Flagellum seen from the outer side (fig. 1, *a*) describes four curves, one near the base forwards, then slightly backwards, thirdly again forwards, and finally sharply backwards; at the termination of the third bend there is a short series of serrations which is not continued on the fourth bend; the flagellum finally ends in a simple point

(in one specimen the point is broken off bluntly near the tip in both jaws). Seen from directly in front (fig. 1, *b*) the flagellum curves outwards from its basal commencement, is then more or less perpendicular, and lastly curves strongly outwards describing almost a semicircle, resembling in its general appearance the horns of some of the antelopes, especially *Tragelaphus*; seen from in front the flagellum is narrowed regularly towards the apex, while seen from the side its width is uniform throughout except in the narrowed terminal bend. The general axis of the flagellum is directed more or less at right angles to the horizontal axis of the mandible; in one specimen, however, its axis is directed more backwards, and here the series of small serrations commences lower down at about the middle of the third bend.

Stridulatory ridges eight in number.

Spination.—Sides of the head thickly covered with short, sharp, whitish spines, first thoracic segment with a posterior collar of similar spines, headplate with a few long, erect, brown setae; tibia below with 5-5 setae and cylinder bristles, metatarsus with long setae, cylinder bristles, and an oval scopular patch below occupying its length except basal and apical extremities; posterior legs without a mane.

Other specimens:

1844.	1♂,	4100 feet,	Great Winterhoek Mountains.			
1842.	1♂,	4500	„	„	„	„
1839.	1♂,	4000	„	„	„	„
1840.	1♂,	4500	„	„	„	„
1841.	1♂,	4700	„	„	„	„
1837.	1♂,	5000	„	„	„	„
1845.	3♂♂,	4300	„	„	„	„

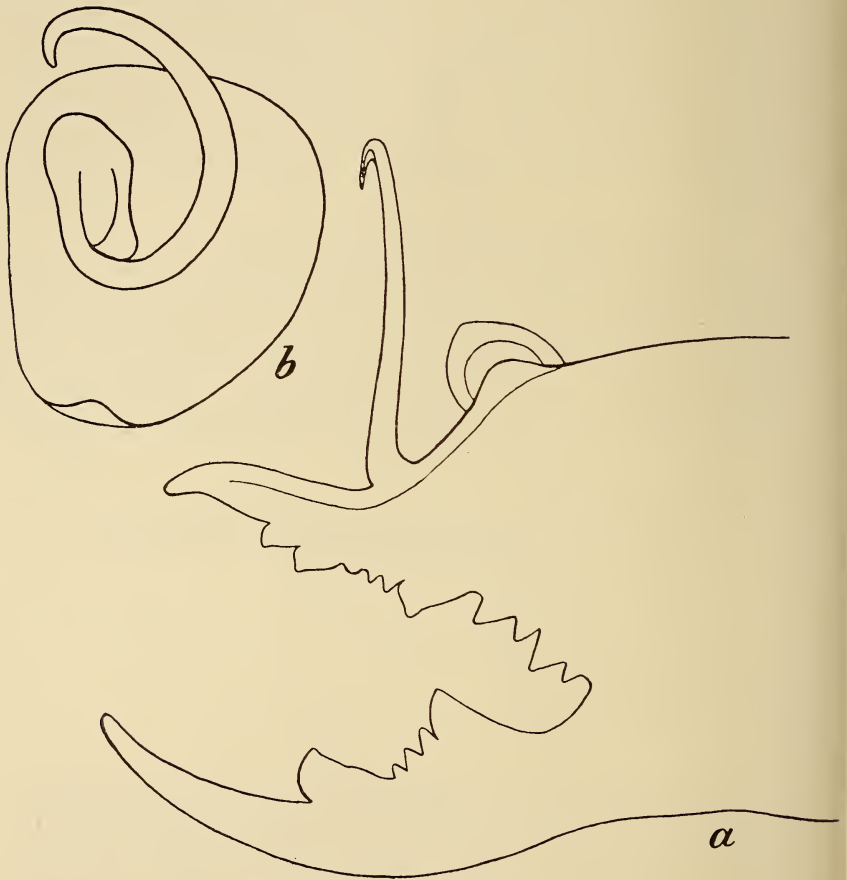
The females of this species have up to the present not been taken; the males seem to have a limited distribution at an altitude of above 4000 feet and have only been taken on these mountains; in a few individuals there is a slight variation in the amount of outward curvature of the flagellum when seen from in front, but otherwise all show conformity to the type.

Measurements of largest specimen. Width of headplate 4.3, length 3.3, length of detached mandible 4.9, tibia 4.7, tarsus+metatarsus 4.7, total length 21.9 mm.

Solpuga bovicornis, n. sp.

(Text-fig. 2.)

1 ♂, 1866, Matroosberg Mountains, Hex River.

Closely resembling *S. antelopicornis*, differing in the shape of the flagellum and the dentition.FIG. 2.—*Solpuga bovicornis*, n. sp.

Colour as in *S. antelopicornis*, the dorsal lateral white bands not contrasting so noticeably with the dark central band.

Dentition.—Outer series of upper jaw seen from the outer side (fig. 2, *a*) resembling that of *S. antelopicornis* except that there are three small teeth between the two main anterior teeth and the third

main tooth, the first of these three intermediate teeth being either low and rounded or else toothlike and resembling the two succeeding teeth and smaller than them. Inner series as in *S. antelopicornis*.

Lower jaw as in fig. 2, *a*, with three teeth between the two main teeth, the first of which instead of being an obsolete granule as in *S. antelopicornis* is a distinct tooth; the anterior main tooth notched in the middle.

Flagellum quite different in shape to that of *S. antelopicornis*; seen from the outer side (fig. 2, *a*) it is perpendicular to the main axis of the jaw, slightly curved and slightly tapering distally; the terminal portion is bent round inwardly and slightly forwards, there are no serrations; seen from in front and a little above (fig. 2, *b*, remaining structures of the jaw not shown), the flagellum curves downwards, then outwards, and finally inwards and downwards, the whole rather resembling in outline the shape of the human ear; the width is more or less uniform except in its distal portion which is slightly tapering.

Stridulatory ridges 6-7.

Spination as in *S. antelopicornis*.

Measurements.—Breadth of headplate 4·2, length 3·2, length of mandible 4·7, tibia 4·3, tarsus+metatarsus 4·8, total length 21·2 mm.

Solpuga montana, n. sp.

(Text-fig. 3.)

1 ♂, 1874, Matroosberg Mountains.

Closely related to *S. maraisi*, Hewitt.

♂. *Colour*.—Headplate and appendages brown with a reddish tinge, abdomen with a median brown band above, darker along its lateral margins, sparsely clothed with light brown hair; sides blackish brown, thickly clothed with greyish-yellow hair; ventral surface yellow-brown, a reddish-brown stripe at each side composed of a spot in each segment, last two segments black.

Dentition seen from inner side (fig. 3, *a*) as in *S. maraisi* with minor differences, the tooth between the flagellum and fang apex on the upper surface of the dorsal jaw here replaced by a short keel which is surmounted by a little tooth at its commencement.

Flagellum reaching to only half-way between the basal enlargement and ocular tubercle; seen from the side, the anterior bend occurs farther back than in *S. maraisi*, its width tapers gradually to the point of bifurcation where it divides into a lower blunt portion and an upper slender portion with serrations as shown in enlarged figure

of the tip of the flagellum (fig. 3, *b*); seen from above, the flagellum is a little wider than the mandible at its anterior bend and tapers

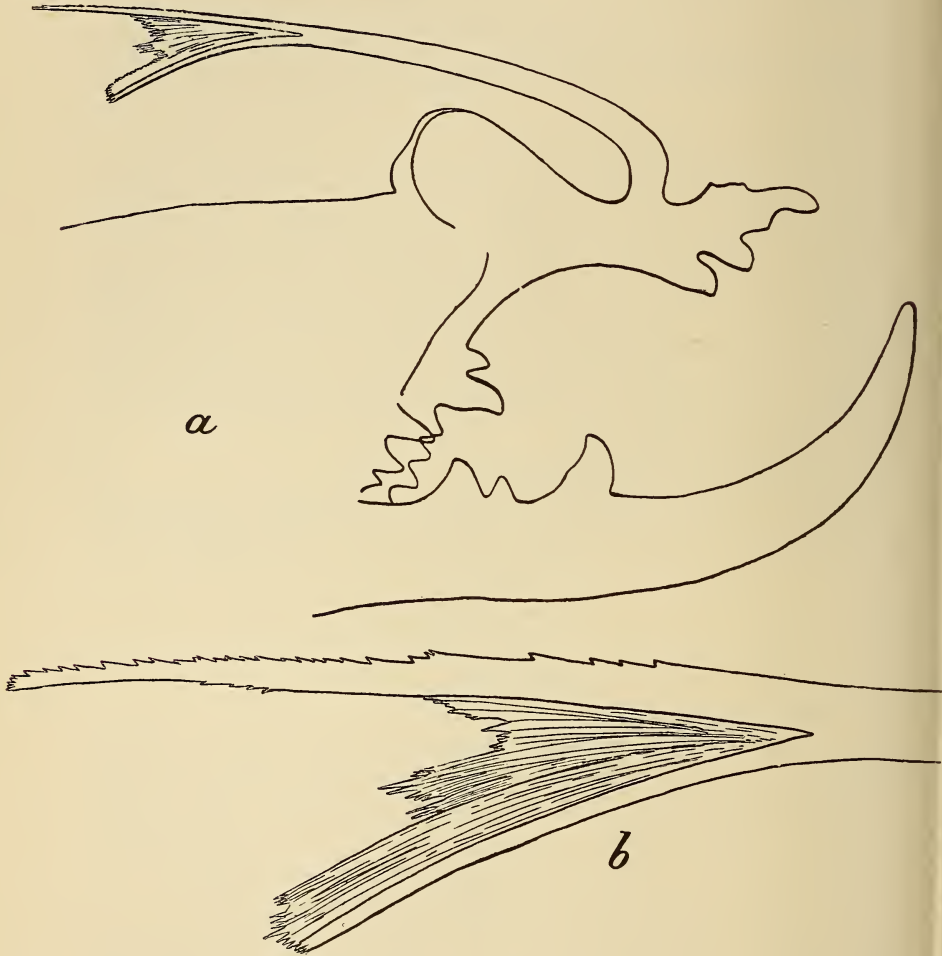


FIG. 3.—*Solpuga montana*, n. sp.

regularly to the apex; the axis of flagellum from above is parallel to the longitudinal axis of the jaw or directed slightly inwards.

Posterior legs clothed with yellow silky hairs but not forming a mane.

Mandibles with 8 sinuously curved stridulatory ridges.

Palp.—Metatarsus below scopulate along its length except in basal fifth.

Measurements.—Length of mandible 7·5, width of headplate 5·5, length 4·6, tibia 6·8, tarsus+metatarsus 7·9, total length 31·5 mm.

2 ♀♀, 1867, Matroosberg Mountains, 4000–5000 feet.

♀. *Colour* in general similar to that of the ♂; tibia and metatarsus of fourth leg, tarsus of palp darker, tergites a little darker than the rest of abdomen, infuscated laterally forming two narrowly converging stripes, last three tergites blackish throughout; sides clothed with yellowish silky hairs; sternites infuscated laterally forming two posteriorly meeting stripes, these much farther apart than the dorsal stripes.

Dentition.—Outer series of upper jaw with two main anterior teeth, the second slightly larger than the first, then a small intermediate tooth and close to this a third large main tooth, then 4 moderate teeth, the first and third larger than the second and fourth; inner series consisting of 3 teeth, the first large, the second moderate, the third minute, the second nearer to the third than to the first; lower jaw powerful, the distance between the fang-tip and the first tooth much less than in the ♂, one intermediate tooth.

Posterior legs with long silky hairs as in the ♂.

Measurements of ♀.—Length of mandible 6·9, width of headplate 5, length 4, tibia 4·5, tarsus+metatarsus 5·5, total length 25 mm.

Other specimens :

1871.	1♂,	4000 feet, Matroosberg Mountains.
1869.	2♂♂,	” ” ” ”
1873.	1♀,	” ” ” ”
1870.	1♀,	” ” ” ”
1863.	1♂, 1♀,	4200 ” ” ” ”
1853.	2♀♀,	3700 ” ” ” ”
1852.	1♀,	4500 ” ” ” ”

Solpuga masienensis, n. sp.

(Text-fig. 4.)

1 ♂, 1 ♀, 6389, Masiene, P.E. Africa.

Colour.—Mandibles infuscated above but not at the sides, headplate broadly infuscated anteriorly, narrowly posteriorly, forming a broad V-shaped patch; abdomen greyish above and below, tarsus and apex of metatarsus of palp slightly infuscate, remainder yellow.

Dentition.—Outer series as in fig. 4, *a*; inner series consisting of a

large distal, moderate middle, and minute proximal tooth, the middle much nearer to the proximal than to the distal tooth.

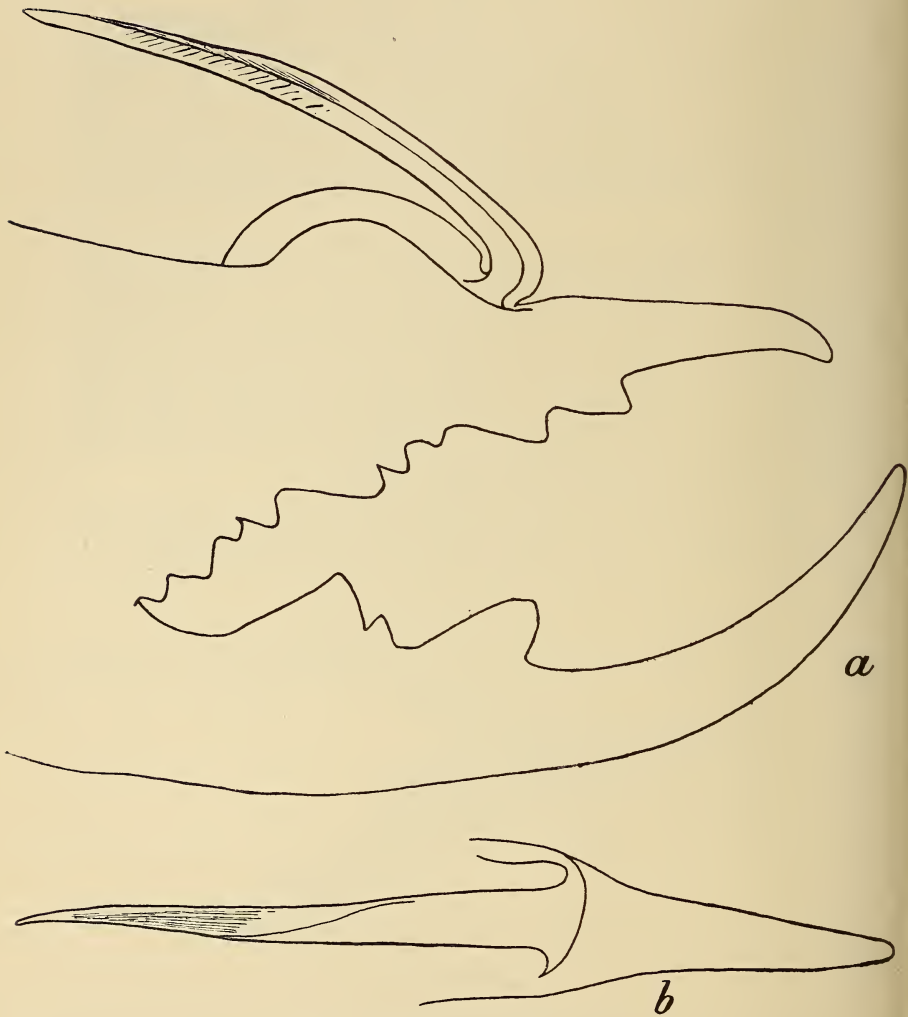


FIG. 4.—*Solpuga masienensis*, n. sp.

Flagellum (fig. 4, *a*) reaching to just half-way between the basal enlargement and anterior margin of the headplate; seen from the outer side it is simple, without serrations, and flattened from above downwards in its anterior half and from side to side in its posterior

half; seen from above (fig. 4, *b*) it is a long, wedge-shaped structure; basal enlargement low and rounded above; fang of jaw just anterior to the bend of the flagellum broad, its upper surface flat to slightly concave (a cross-section taken here would be triangular in shape with the apex of the triangle directed downwards); inner tooth, if present, a minute granule.

Spination.—Mandibles above, with numerous long, strong spines, headplate thickly covered with short spines, three strong spines (similar to those on the mandibles), forming a recurved row on each side of and just behind the ocular tubercle; the latter with two clusters of spines, one anterior, the other posterior to the eyes; headplate fairly densely covered with long, erect setae; metatarsus of palp with a broad scopulate area below, except at base and apex, tibia with a row of 4 long curved setae on its inner side, femur with a row of 4-5 spiniform setae on the inner side.

Measurements.—Width of headplate 7.9, length (including ocular tubercle) 7, tarsus+metatarsus 12.8, tibia 13.3, femur 15.4, total length 31 mm.

♀. Colour as in ♂.

Headplate very much broader than in the ♂, almost twice as broad as long, without strong spines but with a few setae, mandibles with a few strong spines above.

Dentition.—Jaws and teeth much more powerful and larger than in the ♂; upper jaw with two large anterior teeth, the second of which is larger than the first, then two intermediate teeth, the second of which is about twice the size of the first, and is closely followed by a third large main tooth equal in size to the second main tooth, then four teeth, the first and third larger than the second and fourth; inner series consisting of three teeth, the first of which is long and sharp; lower jaw with three teeth fairly close together, the first and third (main teeth) very large.

Measurements.—Width of headplate 10, length 5.6, tarsus+metatarsus 11.3, tibia 10.8, femur 11.7 mm., total length 41 mm.

This species is probably most nearly related to *S. darlingi*, Poc.

Solpuga intermedia, n. sp.

(Text-fig. 5.)

1 ♂, 12264, Montagu Baths.

Colour.—Headplate and appendages yellow, terminal segments of fourth leg a little darker; abdomen dark brown, tergites with two

posteriorly converging blackish stripes at the sides, sternites with a pair of similar but less distinct lateral stripes; malleoli not edged with black.

Dentition very similar to that of *S. erythronotoides*, Hewitt (Ann. Transv. Mus., vol. vii, p. 33, text-fig. 6); the small keel in front of the anterior bend of the flagellum is here bluntly and not conspicuously terminated, but the dentition is otherwise similar to that of *erythronotoides*, *loc. cit.*

Flagellum reaching to about half-way between apex of the upper



FIG. 5.—*Solpuga intermedia*, n. sp.

jaw and the posterior margin of mandible (fig. 5); it is not so curved as in either *erythronota* or *erythronotoides*, the median portion being almost straight and the distal portion very slightly bent downwards and (seen from above) inwards.

Measurements.—Length of upper mandible 7·5, width of headplate 5·5, length 4·2, tibia 7·1, tarsus + metatarsus 8·1, total length 29 mm.

This may prove to be a variety of either *S. erythronotoides* or *S. erythronota*, though it differs from both in the longer and less curved flagellum, and also in the greater length of the lower jaw as compared with the upper.

Solpuga calycicornis, n. sp.

(Text-fig. 6.)

2 ♂♂, 14582, Burghersdorp.

Colour.—Head and appendages yellow, the latter, especially the fourth leg and palp, with the terminal segments more or less infus-

cated; abdomen above with a broad, median, blackish-brown stripe (deep black in the last four or five segments), bounded laterally by a narrow band of yellow silky hairs.

Dentition as in fig. 6, *a*, closely resembling that of *S. derbiana*, Pocock, as in figure given by Hewitt, Ann. Transvaal Museum, vol. vii, p. 35, text-fig. 7. Seen from the inner side there is in front of and a little below the anterior bend of the flagellum a short, projecting ridge or keel provided with a few granules which terminates about half-way between the fang tip and the first obsolete tooth of the upper jaw without forming a distinct tooth; inner row of double series consisting

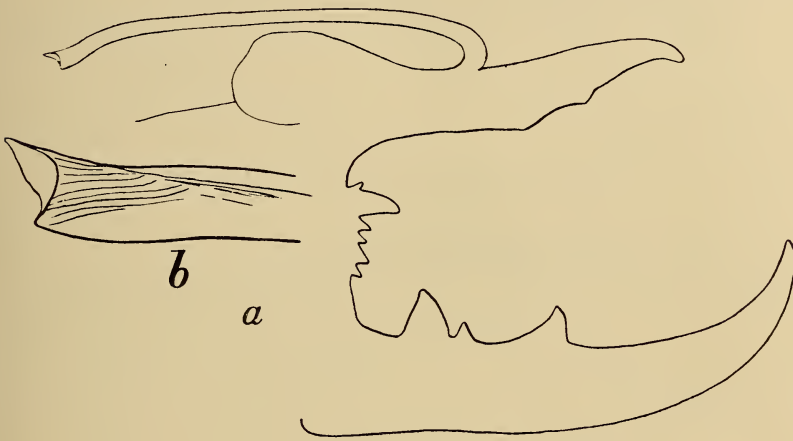


FIG. 6.—*Solpuga calycicornis*, n. sp.

of three teeth increasing progressively in size, the distal one larger and a little farther from the middle one than is the latter from the proximal one. No stridulatory ridges.

Flagellum as in fig. 6, *a*, reaching to about half-way between the basal commencement of flagellum and eye tubercle; seen from above, its long axis is parallel to that of the upper jaw; seen from the side, the flagellum runs practically straight except for the distal portion which is bent a little downwards; seen under higher magnification (fig. 6, *b*), the apex of the flagellum is cup-like with the upper part of its rim drawn out to a point.

Some long, fine hairs on the palpi and some shorter silky ones on the fourth leg, but no mane.

This species closely resembles *S. derbiana*, the main difference being the peculiar structure of the terminal portion of the flagellum; it

also resembles *S. coquinae*, Hewitt, from Cookhouse, but is smaller in size than either *derbiana* or *coquinae*.

Measurements of larger specimen. Width of headplate 4·3, tibia 6, tarsus+metatarsus 5·7, total length 18·5 mm.; total length of smaller specimen 15·5 mm.

Solpuga phylloceras, n. sp.

(Text-figs. 7, 8, 9.)

1 ♂, 1 ♀, 5215, Pocaltsdorp, near George, C.P.

Resembling *S. vineta* in the flagellum and dentition.

♂. *Colour*.—Headplate, mandibles, and appendages yellow, without



FIG. 7.—*Solpuga phylloceras*.

markings; abdomen with tergites light brown, bordered at each side by a stripe of deeper brown, sides and sternites dirty yellow. Malleoli without any infuscation.

Dentition as in figs. 7 and 8, *b*; the toothless anterior portion of the dorsal fang is shorter than in *vineta*; in the latter species in a number of specimens examined from Signal Hill, Cape Town, the second main

tooth is more or less truncated, fig. 8, *a* representing an extreme case, while that of *phylloceras* is normal; in *vincta* the keel along the dorsal surface of the fang in front of the anterior bend of the flagellum is always provided with more than one small tooth, sometimes as many



FIG. 8.—*a*, *Solpuga vincta*; *b*, *Solpuga phylloceras*.

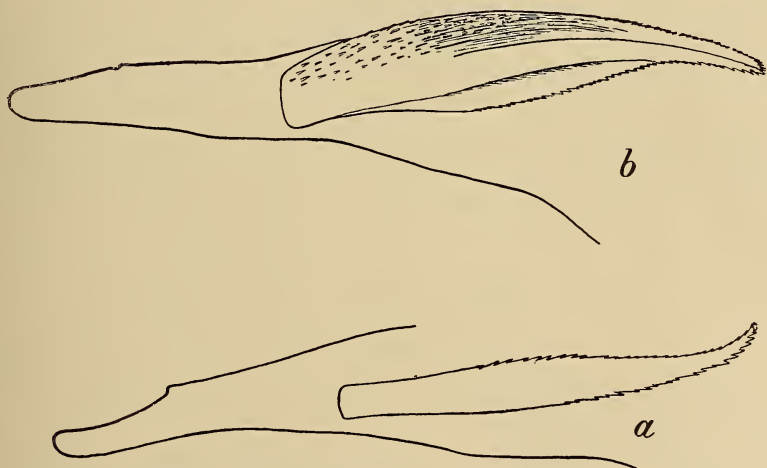


FIG. 9.—*a*, *Solpuga vincta*; *b*, *Solpuga phylloceras*.

as shown in fig. 8, *a*, though there is usually one prominent and larger than the rest; in *phylloceras* there is one small tooth, the dorsal keel being otherwise smooth (fig. 8, *b*).

Inner series of teeth consisting of two stout, well-separated teeth, the distal larger than the proximal one. Lower jaw resembling that of *vincta* except that the anterior, untoothed portion is shorter.

Flagellum seen from the outer side as in fig. 7. In its brevity and

general formation it resembles that of *vincta*, but is stouter at its base and narrows towards its distal extremity, while the reverse is true of *vincta*. Seen from above (fig. 9, *b*), it differs markedly from the latter in being leaf-like and much broader (at least twice the width), while the apex curves towards the outer side of the mandible (in *vincta* it curves towards the inner side, fig. 9, *a*).

Spination.—Headplate provided with irregularly scattered, brown setae of varying length, cleft at their tips; mandibles with similar but stouter setae; metatarsus of palp with irregular and ill-defined scopula.

♀. *Colour* as in ♂, but the tergites less distinctly pigmented.

Dentition very different to that of the ♂, the teeth large and massive, the upper jaw without a toothless space; upper jaw with two large anterior main teeth, the second a little larger than the first, then an intermediate tooth adjacent to and about half the height of the fourth (main) tooth, which is equal to the second in height, then four moderate teeth; inner series consisting of two large, conical teeth. Lower jaw massive and short, the three teeth large and close together.

Measurements of ♂.—Width of headplate 4·5, length of headplate 3·5, length of mandible 6, tarsus + metatarsus 5·6, tibia 5, total length 23 mm. Total length of ♀ 24 mm. This species belongs to the *maraisi*, *vincta*, *spectralis*, *montana* group, but is much more nearly allied to *vincta* than to any of the other species; it differs from the latter in the much broader leaf-like flagellum and in its light coloration.

Solpuga stiloceras, n. sp.

(Text-figs. 10, 11, 12.)

2 ♂♂, 2 ♀♀. Seven-weeks Poort, Ladismith, Cape Province. At about 6000 feet altitude.

♂. *Colour*.—Headplate and thorax chocolate brown, mandibles dorsally brown, yellow at the sides; pedipalps and legs chocolate brown but with a distinct reddish tinge, the terminal segments blackish; abdomen above, brown to black in the middle, a narrow longitudinal stripe on each side composed of white or dirty-white hairs; the central dark portion with some coarse yellowish hairs; abdominal sternites brown, not as dark as the tergites, clothed with silky yellowish hairs; the genital sclerites and sternites in the one specimen mottled with a number of round black spots near their posterior borders; headplate with some long, brown, scattered, seti-



FIG. 10.

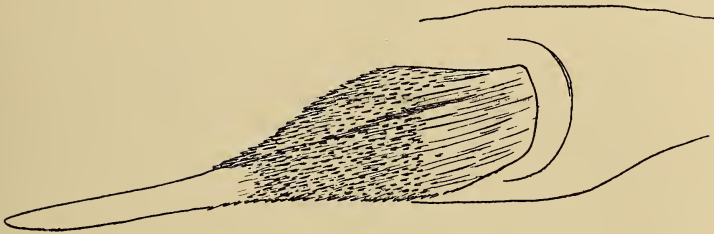


FIG. 12.



FIG. 11.

FIGS. 10, 11, 12.—*Solpuga stiloceras*, n. sp.

form hairs and some long yellow ones along the lateral and posterior margins; fourth leg with some long, dirty-white, silky hairs, but no mane; malleoli with infuscated borders.

Flagellum resembling that of *S. phylloceras*, but different when viewed from above. It is shorter, and the anterior bend is situated above the second main tooth and not behind it as in *phylloceras*; the basal enlargement is high; seen from the side (fig. 10), the flagellum appears to be a normal, slightly tapering structure, the serrations being hardly visible; seen from above (fig. 12), it appears as a much flattened, leaf-like structure, its width being much greater than its dorso-ventral thickness; it differs considerably from *phylloceras* in being broad near the base and then tapering rather suddenly, the distal third being very narrow as compared with the remainder; the basal portion and distal two-fifths are free from serrations and spicules.

Dentition as in fig. 11, resembling *S. phylloceras*; the terminal portion of the dorsal fang provided with a keel along the mesial side above; the large toothless interval followed by 2 teeth, the first of which is moderate and not minute as in *phylloceras*; these are followed by the double series of 4 outer and 3 inner teeth, the first of the inner teeth the largest, the third smallest.

Mandibles with fairly stout and numerous brown setae above, stridulatory ridges 8 in number (in both sexes).

Palps. Metatarsus with an oval, scopulated patch below except at apical and basal extremities.

Measurements.—Width of headplate 4·6, length 4, tibia 5·5, tarsus + metatarsus 6·3; total length 23·2 mm.

♀. *Colour*.—Much as in ♂, the abdominal tergites without the well-defined white stripes at the sides, the sides distinctly reddish with silky yellow-white hairs; sternites light brown (the one ♀ with mottling as in the ♂ on the genital region and 5 anterior abdominal sternites), with dark, infuscated, lateral borders; headplate with brown setae not as numerous or as stout as in ♂; malleoli infuscated.

Dentition normal, without a large toothless space as in the ♂; single series consisting of 2 main anterior teeth, then a small tooth, then a third main tooth; double series consisting of 4 outer and 3 inner teeth, the third inner tooth minute.

Measurements.—Width of headplate 4·5, length 3·5; total length 20 mm.

This species belongs to the sub-group formed by *S. vincta* and *S.*

phylloceras; it is evidently more closely allied to *phylloceras* than to *vineta*, but differs from the former in the shortness of the flagellum, the shape of the flagellum seen from above, and the fact that its distal two-fifths is free of serrations. In colour it resembles the typical diurnal coloration of *vineta*, and in the dentition it perhaps resembles this species slightly more than *phylloceras*.

Genus ZERIASSA, Poc.

Zeriassa furcicornis, n. sp.

(Text-fig. 13.)

1 ♂, 1896, Kaapmuiden, E. Transvaal.

Colour.—Headplate infuscated pale violet, darker at the sides, bisected in the middle by a pale, narrow line; mandibles infuscated pale violet, a darker patch at the sides anteriorly, which gives off three longitudinal lines, one inner, one in the middle, and one outer lateral; palps, except at base of femur; legs, except tarsal segments, infuscated violet, a little lighter below; tergites of abdomen violet, sides and sternites yellow.

Dentition as in fig. 13, *a*, seen from the outer side; inner series consisting of 3 teeth diminishing in size posteriorly, the second a little nearer to the third than to the first.

Flagellum.—Seen from above, the flagellum at its anterior bend is equal in width to the width of the jaw, narrowing gradually to its point of bifurcation and describing a regular curve inwards; seen from the outer side (fig. 13, *a*), the flagellum is flattened from above downwards and is slightly twisted so that its horizontal plane becomes a more or less vertical one in its distal portion; the tip of the flagellum (fig. 13, *b*) is bifurcate, the lower prong being simple, the upper one serrated; the space between the two prongs is filled up with transparent substance which is slightly frayed at its distal edge; a narrow curved band rises from the lower prong and apparently connects it with the upper one.

Spinination.—Coxae of third pair of legs with a group of 7-9 stout cylindrical bristles with slightly enlarged and darkened tips; metatarsus scopulate below in its proximal two-fifths, the unscopulate portion with an irregular double row of 6-7 spines, tarsus with 3-4 spines below.

Measurements.—Length of mandible 4·4, mandible+headplate 7, width of headplate 4, total length 17 mm.

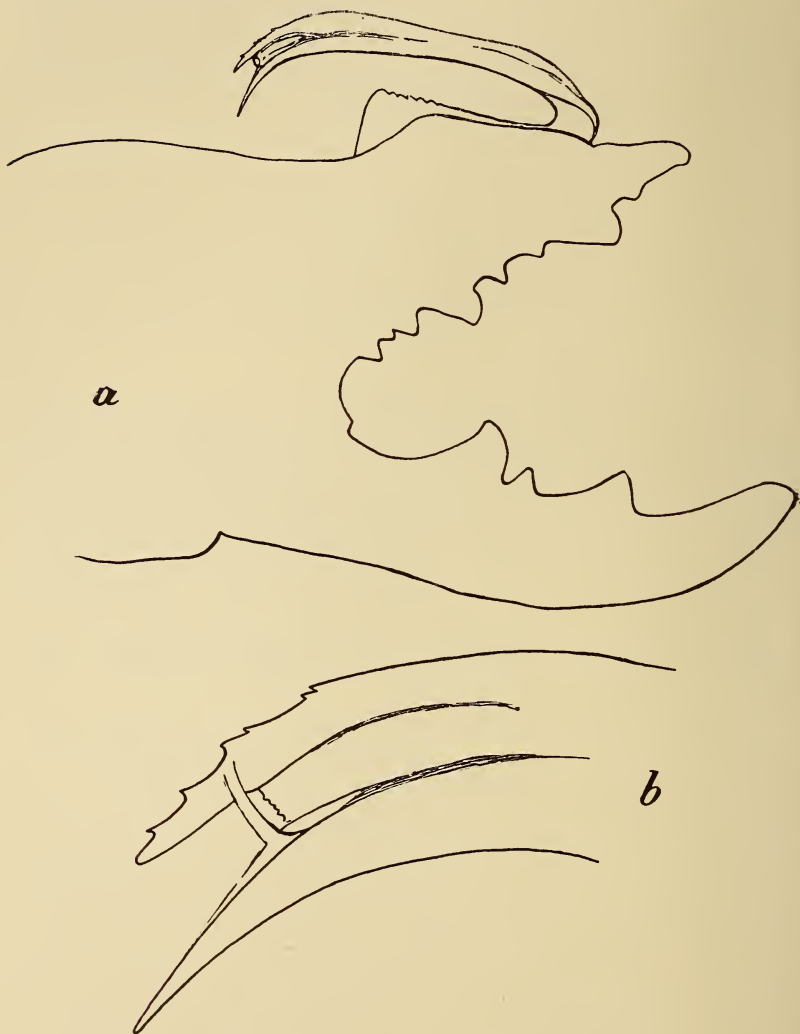


FIG. 13.—*Zeriassa furcicornis*, n. sp.

This species differs from *Z. cuneicornis*, Purcell, in at least the bifurcation of the distal apex of flagellum, while differing from *Z. purcelli*, Hewitt, in the same respect, as well as in the greater length of the whole flagellum, and in the dentition.

Genus BLOSSIA, E. Simon.

Blossia alticursor, n. sp.

(Text-fig. 14.)

1 ♂, 1837. Great Winterhoek Mountains, 5000 feet.

Closely related to *B. litoralis*, Purcell, Ann. S.A.M., vol. iii, p. 4.

Colour as in *B. litoralis*, loc. cit.

Mandibles.—Upper jaw stout, its apex less curved than in *B. litoralis* without a differentiated bristle, dentition as in fig. 14; lower jaw

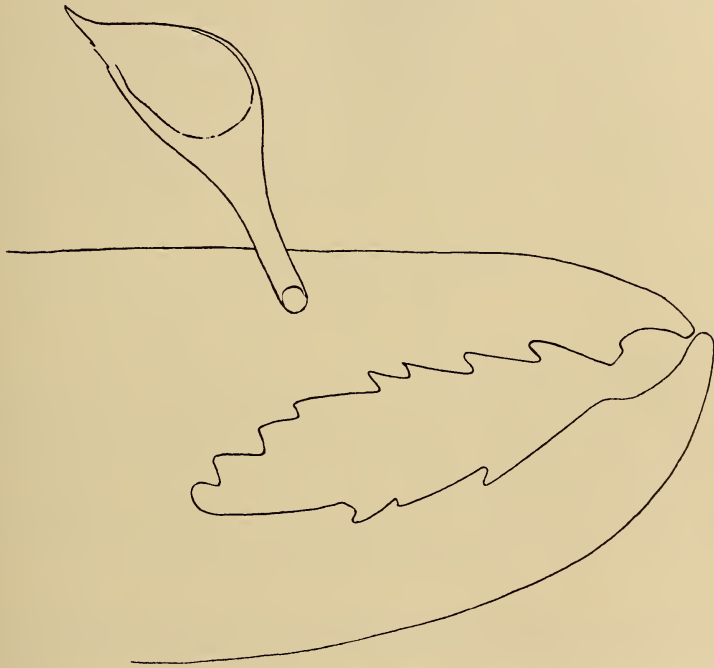


FIG. 14.—*Blossia alticursor*, n. sp.

stouter and on an average deeper than the upper jaw (the opposite is the case in *B. litoralis*); the dentition of both jaws in general resembles that of *B. litoralis*, except that the first tooth of the upper jaw is unaccompanied by a “smaller, more conical, outer tooth” next to it; the first tooth of the lower jaw is here replaced by a low, rounded, talus-like prominence behind which the outline of the jaw runs straight as far as the second tooth, thus giving greater depth to the jaw than is the case in *B. litoralis*.

Flagellum, seen from the outer side through the transparent jaw (fig. 14), is more drawn out distally than in *B. litoralis*, and resembles that of *B. crepidulifera*, Purcell; the distal edges are not or very slightly frayed and certainly not so distinctly as in *B. crepidulifera* or *B. litoralis*; when rotated forwards the flagellum surpasses by a little the fang tip of the dorsal jaw.

Spination.—Headplate thickly covered with short spines, some moderately long ones at each side of the headplate and along its posterior border; ocular tubercle in front of and below the eyes with two fairly stout, short, slightly incurved spines.

Tibia of palp with an outer row of 3 spines and an apical seta, inner side without spines; there seem to be no true spines on the metatarsus. Abdomen with the three filiform hair-like structures on the under-surface of second segment as described in *B. crepidulifera*.

Measurements.—Width of headplate 2·8, length 2·3, tibia 3·9, metatarsus+tarsus 3·5, headplate to tip of jaw 2·7, total length about 12·6 mm.

Blossia grandicornis, n. sp.

(Text-fig. 15.)

1 ♂, 6829. Fraserburg, C.P.

Colour.—Mandibles yellow, headplate except a narrow median pale stripe, legs except tarsi, and palpi infuscated reddish brown, tergites infuscated light reddish brown, ventral surface of abdomen ashy grey.

Dentition.—Outer series seen from the outer side as in fig. 15. Inner series consisting of 3 teeth, the first 2 subequal and moderate, the third minute, the second much nearer to the third than to the first.

Flagellum as in fig. 15, seen from the outer side; its distal two-thirds covered with spicules, the edges more or less frayed into minute points, the median rib is stout and very conspicuous, especially distally, where it narrows uniformly; rotated forwards the apex of the flagellum reaches a point which is a little farther from the fang tip than this is from the point of origin of the first tooth.

Spination.—Tibia of palp with 5 spines on the inner side, the two basal ones setiform; proximally at the sides with a number of short cylinder bristles; femora with one or two setae on inner apex; head densely covered with short, sharp prickles, one or two larger spines on the lateral borders of the headplate; a short, stout, inwardly directed spine behind each eye, another on each side between this

and the antero-lateral angle of the headplate ; a pair of strong spines in front of the ocular tubercle, a pair of smaller spines (about half the length of the first pair) behind these and between the eyes.

Second abdominal sternite with a pair of salmon-pink, thickened



FIG. 15.—*Blossia grandicornis*, n. sp.

hair structures on each side of the median line directed inwards and crossing.

Measurements.—Length of mandible 2·5, width of headplate 2·1, length 2·1. Total length 11·5 mm.

This species is related to *B. laminicornis*, Hewitt, from de Aar.

Blossia hessei, n. sp.

(Text-fig. 16.)

1 ♂, 7237. Fraserburg, C.P.

Colour.—Mandibles lightly infuscated with slight indications of

two stripes above, headplate fairly deeply infuscated, anterior margin blackish, a lighter diamond-shaped patch in the centre, legs and palpi except last segment infuscated reddish brown, except the under surfaces, which are yellow and sharply marked off from the infuscated portion; tergites infuscate, more so in posterior than in anterior half, ventral surface of abdomen light ashy grey.

Dentition as in fig. 16, *a* seen from the outer side, fig. 16, *b* from inner side; at the apex of the fang of the upper jaw there is on the outer side a lamina ending in a blunt tooth above the first tooth; inner series consisting of two fairly large subequal teeth, the second of which is

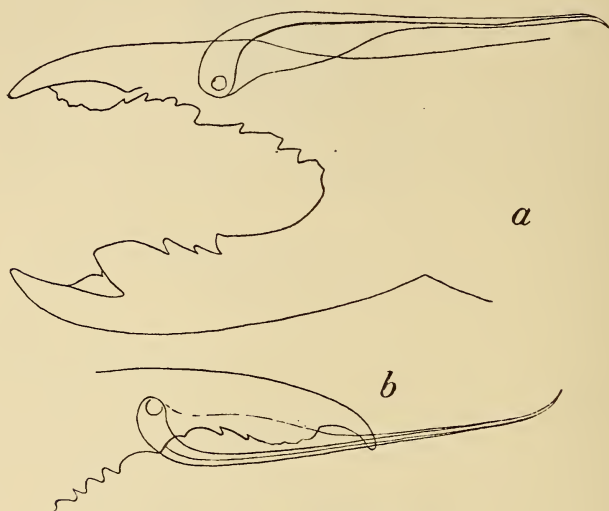


FIG. 16.—*Blossia hessei*, n. sp.

closely followed by a small tooth; the ventral surface of the upper jaw is fringed on the outer side by a row of strong bristles, the most anterior of which, situated in front of and below the rotatory centre, is very stout and short; lower jaw deeper and more massive than the upper jaw.

Flagellum as in fig. 16, *a* and *b*, very long; when rotated forwards (fig. 16, *b*) it exceeds the fang tip by not much less than half its own length; the tip curved downwards narrows to a sharp point.

Spination.—Headplate with short spines not nearly as dense as in *B. grandicornis*; mandibles and headplate with a few long setae cleft at their tips; tibia of palp with three stout setiform spines occupying the inner side of its middle part. Second ventral segment with three

modified hair structures on each side of the middle line directed inwardly and curved.

Measurements.—Mandible 2·1, length of headplate 1·7, width 1·8, total length 9·5 mm.

Blossia falcifera var. *transvaalica*, n. var.

(Text-fig. 17.)

2 ♂♂, 14599. Johannesburg.

Colour as in *B. falcifera*.

Dentition as in fig. 17; the fang tip of the dorsal jaw is longer than in *falcifera*, and is provided just in front of the first tooth with a minute



FIG. 17.—*Blossia falcifera* var. *transvaalica*, n. var.

granule; dentition of lower jaw as in *falcifera*, the first tooth in both these specimens being bifid.

Flagellum (fig. 17) stouter distally than in the type but of the same general form, provided at its apex with a minute hooked process; seen from the side, two bristles arise from the dorsal surface behind the rotatory centre, the one nearest the flagellum passes on the outer side of it, the farthest from the flagellum passes it on the inner side; both project downwards and bear minute prickles, which are, however, not shown in the figure; these two bristles are distinct from the

other normal bristles on account of their outstanding thickness and the fact of their bearing prickles.

Spination.—Headplate and mandibles with a fairly large number of cleft setae; second abdominal sternite with three modified hair structures on each side crossing at their tips.

Total length about 9 mm.

Gen. MELANOBLOSSIA, Purcell.

Melanoblossia ? *hewitti*, n. sp.

(Text-fig. 18.)

1 ♂. Henkries, near the Orange River, Little Namaqualand.

Colour.—Headplate and appendages yellow, tergites of abdomen brown, sides and sternites ashy grey.

Dentition as in fig. 18, *b* seen from the outer side; the upper jaw is almost edentate with a few tooth-like granules. Lower jaw with 5 small but distinct teeth increasing progressively in size distally, pointed and sloping slightly forwards; lower jaw a little longer than the upper.

Flagellum not apparent.

Spination.—Seen from the inner side (fig. 18, *a*), the upper jaw is well provided with feather bristles, the largest and most striking group being composed of 5–6 long, stout plumes; these and 3–4 shorter ones above them seem to be placed on the posterior rim of an elliptical depression which is situated posteriorly and ventrally to the upper jaw; below the main group is a smaller group, their bases forming a rough curve, their tips strongly bent and pointing downwards.

The lower jaw is provided with a number of stout setae of varying lengths which occupy that part of it posterior to the last and smallest tooth; they are most numerous towards the dorsal surface of the jaw, the anterior ones being longest and stoutest; the outer side of the lower jaw is not provided with bristles or setae except for one or two setae at its extreme base near the articulation with the upper jaw. Upper jaw dorsally with one or two forwardly directed setae. Six stridulatory ridges.

Appendages.—Pedipalps with some long, slender, and shorter setae but no spines below; first leg not provided with small or minute claws; all tarsi consisting of one segment; the fourth tarsus resembles that of *Melanoblossia braunsi* in its slenderness, but I am unable to see any sign of an articulation; its length is about ten times its width.

Headplate with short bristles and some longer brown setae.

Abdomen above with a few, sides with fairly numerous cleft setae; second abdominal sternite with a group of five long, fleshy hairs on each side of the median line.

Measurements.—Total length about 10 mm.

In the length and slenderness of the jaws, and especially in the

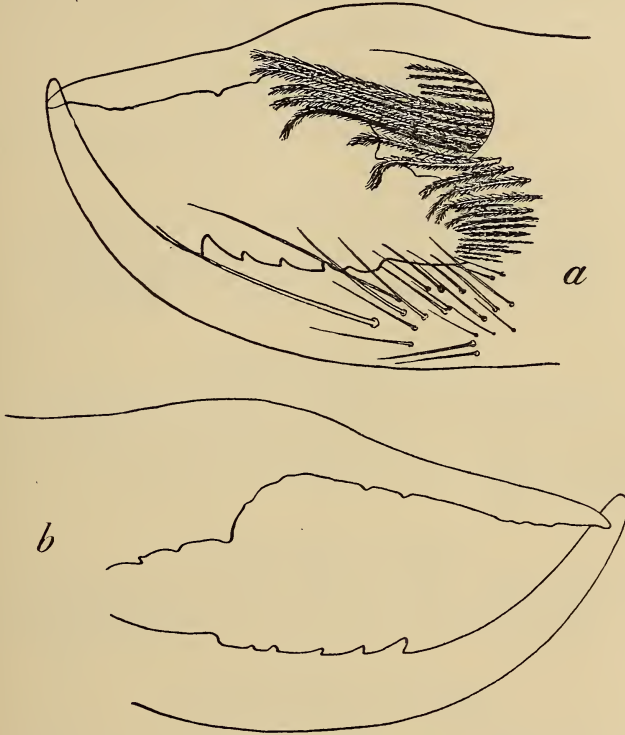


FIG. 18.—*Melanoblossia hewitti*, n. sp.

arrangement of the feather bristles, it resembles *Lipophaga* (*Pseudoblossia*) *schultzei*, Kraepelin, but again differs from this species in having no claws on the first tarsus, in being provided with fleshy hairs on the second abdominal sternite, and in its smaller size. It appears to represent an intermediate stage between *Melanoblossia* and *Lipophaga*.

Although differing from *Melanoblossia* in the important respect of the fourth tarsus, I have placed this species provisionally under this genus until more material can be accumulated. It is named in honour

of our foremost South African arachnologist, Mr. Hewitt, Director of the Albany Museum, Grahamstown, whose widespread knowledge and co-operation have been of invaluable assistance to me in studies of South African arachnids.

OTHER RECORDS.

Gen. SOLPUGA, Licht.

Solpuga vincta, Koch.

1 ♂. 4000 feet, Lemoenshoek, Heidelberg Mountains. Coll. K. H. Barnard.

1 ♂. 2000 feet, Hermanus. Coll. E. L. Gill.

1 ♂. Barrydale, Swellendam District. Coll. A. J. Hesse.

1 ♂. Zuurbraak Peak, Swellendam. Coll. R. F. Lawrence.

1 ♂. Giftberg, Van Rhynsdorp. Coll. R. M. Lightfoot.

Solpuga maraisi, Hewitt.

1 ♂. Tradouw Pass, Swellendam. Coll. R. F. Lawrence.

1 ♂. 6000-7000 feet, Matroosberg Mountains, Ceres. Coll. R. W. Tucker.

1 ♂. Touws River. Coll. Paynter.

Solpuga celeripes, Hirst.

6 ♂♂. Kaapmuiden, Eastern Transvaal. Coll. R. W. Tucker.

1 ♂. Acornhoek, Eastern Transvaal. Coll. R. W. Tucker.

Solpuga serraticornis, Purcell.

1 ♂. Kaapmuiden, Eastern Transvaal. Coll. R. W. Tucker.

1 ♂. Messina, North Transvaal. Coll. R. W. Tucker.

Solpuga schonlandi, Pocock.

5 ♂♂. Smithfield, Orange Free State. Coll. Kannemeyer.

1 ♂. Grootfontein, South West Africa. Coll. R. M. Lightfoot.

Solpuga monteiroi, Pocock.

2 ♂♂. Junction of the Crocodile and Marico rivers, Transvaal. Coll. R. W. Tucker.

Solpuga sericea, Pocock.

1 ♂. Grootfontein, South West Africa. Coll. J. Drury.

Solpuga fusca, Koch.

Specimens from Caledon, Kalk Bay, Constantia, Stellenbosch, Cape Province.

Gen. DAESIA, Karsch.

Daesia lineata, Pocock.

1 ♂. Fraserburg, C.P. Coll. A. J. Hesse.

Daesia rhodesiana, Hewitt.

2 ♂♂. Messina, North Transvaal. Coll. R. W. Tucker.

1 ♂. Potgietersrust, Transvaal. Coll. Dr. Melle.

Daesia bernhardi, Pocock.

1 ♂. Montagu. Coll. R. W. Tucker.

1 ♀. Montagu. Coll. K. H. Barnard.

1 ♂, 1 ♀. Matroosberg Mountains, Ceres. Coll. R. M. Lightfoot.

Daesia namaqua, Kraepelin.

1 ♂. Henkries, near the Orange River, Little Namaqualand.
Coll. R. M. Lightfoot.

Gen. BLOSSIA, Simon.

Blossia echinata, Purcell.

1 ♀, 1 ♂. Beaufort West. Coll. W. F. Purcell.

Gen. CHELYPUS, Purcell.

Chelypus barberi, Purcell.

2 ♂♂. Kalahari Desert, 600 miles north-east of Upington. Coll. Jackson.

Chelypus lennoxae, Hewitt.

1 ♂. Upington. Coll. Father Sollier.